The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor layer over a substrate;

emitting a laser beam which is a fundamental wave from a laser oscillator;

delivering the laser beam onto [[a]] the semiconductor layer; [[and]]

crystallizing the semiconductor layer by irradiating with the laser beam which generates multiphoton absorption while moving the surface of the semiconductor layer relatively to the laser beam;

forming an insulating layer over the crystallized semiconductor layer;

forming a conductive layer over the crystallized semiconductor layer with the insulating layer interposed therebetween.

2. (Currently Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor layer over a substrate;

forming an insulating layer over the semiconductor layer;

forming a conductive layer over the semiconductor layer with the insulating layer interposed therebetween;

forming an impurity region in [[a]] the semiconductor layer;

emitting a laser beam which is a fundamental wave from a laser oscillator;

delivering the laser beam onto the semiconductor layer; and

activating the impurity region by irradiating with the laser beam which generates multiphoton absorption while moving the surface of the semiconductor layer relatively to the laser beam.

3. (Currently Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor layer over a substrate;

emitting a laser beam which is a fundamental wave from a laser oscillator;

delivering the laser beam onto [[a]] the semiconductor layer; and

crystallizing the semiconductor layer by irradiating with the laser beam which generates multiphoton absorption while moving the surface of the semiconductor layer relatively to the laser beam[[,]];

forming an insulating layer over the crystallized semiconductor layer;

forming a conductive layer over the crystallized semiconductor layer with the insulating layer interposed therebetween;

wherein the laser beam has a peak out power ranging from 1 GW/cm^2 to 1 TW/cm^2.

4. (Currently Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor layer over a substrate;

forming an insulating layer over the semiconductor layer;

forming a conductive layer over the semiconductor layer with the insulating layer interposed therebetween;

forming an impurity region in [[a]] the semiconductor layer;

emitting a laser beam which is a fundamental wave from a laser oscillator;

delivering the laser beam onto the semiconductor layer; and

activating the impurity region by irradiating with the laser beam which generates multiphoton absorption while moving the surface of the semiconductor layer relatively to the laser beam,

wherein the laser beam has a peak out power ranging from 1 GW/cm^2 to 1 TW/cm^2.

5. (Currently Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a ~~semiconductor~~ conductive layer over a substrate;

forming an insulating layer adjacent to the ~~semiconductor~~ conductive layer;

forming a ~~conductive~~ semiconductor layer adjacent to the insulating layer;

emitting a laser beam which is a fundamental wave from a laser oscillator;

delivering the laser beam onto the semiconductor layer; and

crystallizing the semiconductor layer by irradiating with the laser beam which generates multiphoton absorption while moving the surface of the semiconductor layer relatively to the laser beam.

6. (Previously Presented) The method of manufacturing the semiconductor device according to claim 1,

wherein the laser beam which is a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

7. (Previously Presented) The method of manufacturing the semiconductor device according to claim 1,

wherein the laser beam has a repetition rate of 10MHz or more.

8. (Previously Presented) The method of manufacturing the semiconductor device according to claim 1,

wherein the laser beam which is a fundamental wave is emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$,

wherein at least one of Nd, Yb, Cr, Ti, Ho, and Er is added to the crystal as a dopant.

9. (Previously Presented) The method of manufacturing the semiconductor device according to claim 1,

wherein the laser beam has one of a linear shape and an elliptical shape on the irradiation surface.

10. (Currently Amended) A laser irradiation method comprising the steps of:

emitting a first laser beam which is a fundamental wave from a laser oscillator;

processing the first laser beam into a second laser beam <u>which is the fundamental wave and</u> which has one of a linear shape and a rectangular shape on an irradiation surface;

irradiating an object with the second laser beam <u>which is the fundamental wave and</u> which generates a multiphoton absorption.

11. (Original) The laser irradiation method according to claim 10, wherein the first laser beam has a repetition rate of 10 MHz or higher.

12. (Previously Presented) The laser irradiation method according to claim 10, wherein the first laser beam which is a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

13. (Previously Presented) The laser irradiation method according to claim 10,

wherein the first laser beam is a laser beam emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$,

wherein at least one of Nd, Yb, Cr, Ti, Ho, and Er is added to the crystal as a dopant.

14. (Original) A laser irradiation apparatus comprising:

a solid state laser oscillator for emitting a laser beam which is a fundamental wave;

a mechanism for projecting and delivering the laser beam which is the fundamental wave onto an irradiation surface, said mechanism including a condenser lens; and

means for moving the irradiation surface relatively to the laser beam which is the fundamental wave,

wherein the condenser lens forms the laser beam which is the fundamental wave into one of a linear shape and an elliptical shape .

15. (Previously Presented) The laser irradiation apparatus according to claim 14, wherein the condenser lens includes two pieces of convex cylindrical lenses.

16. (Previously Presented) The laser irradiation apparatus according to claim 14, wherein the laser beam has a repetition rate of 10 MHz or higher.

17. (Previously Presented) The laser irradiation apparatus according to claim 14, wherein the laser beam emitted from the laser oscillator is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

18. (Previously Presented) The laser irradiation apparatus according to claim 14, wherein the laser beam oscillated from the laser oscillator is emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$ added at least one of Nd, Yb, Cr, Ti, Ho, and Er as a dopant.

19. (Previously Presented) The laser irradiation apparatus according to claim 14, wherein the laser beam has a peak out power ranging from 1 GW/cm^2 to 1 TW/cm^2.

20. (Previously Presented) The method of manufacturing the semiconductor device according to claim 2,

wherein the laser beam which is a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

21. (Previously Presented) The method of manufacturing the semiconductor device according to claim 3,

wherein the laser beam which is a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

22. (Previously Presented) The method of manufacturing the semiconductor device according to claim 4,

wherein the laser beam which is a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

23. (Previously Presented) The method of manufacturing the semiconductor device according to claim 5,

wherein the laser beam which is a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

24. (Previously Presented) The method of manufacturing the semiconductor device according to claim 2,

wherein the laser beam has a repetition rate of 10MHz or more.

25. (Previously Presented) The method of manufacturing the semiconductor device according to claim 3,

wherein the laser beam has a repetition rate of 10MHz or more.

26. (Previously Presented) The method of manufacturing the semiconductor device according to claim 4,

wherein the laser beam has a repetition rate of 10MHz or more.

27. (Previously Presented) The method of manufacturing the semiconductor device according to claim 5,

wherein the laser beam has a repetition rate of 10MHz or more.

28. (Previously Presented) The method of manufacturing the semiconductor device according to claim 2,

wherein the laser beam which is a fundamental wave is emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$,

wherein at least one of Nd, Yb, Cr, Ti, Ho, and Er is added to the crystal as a dopant.

29. (Previously Presented) The method of manufacturing the semiconductor device according to claim 3,

wherein the laser beam which is a fundamental wave is emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$,

wherein at least one of Nd, Yb, Cr, Ti, Ho, and Er is added to the crystal as a dopant.

30. (Previously Presented) The method of manufacturing the semiconductor device according to claim 4,

wherein the laser beam which is a fundamental wave is emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$,

wherein at least one of Nd, Yb, Cr, Ti, Ho, and Er is added to the crystal as a dopant.

31. (Previously Presented) The method of manufacturing the semiconductor device according to claim 5,

wherein the laser beam which is a fundamental wave is emitted from a laser oscillator which includes a crystal selected from the group consisting of Sapphire, YAG, ceramics YAG, ceramicsY_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, and $GdVO_4$,

wherein at least one of Nd, Yb, Cr, Ti, Ho, and Er is added to the crystal as a dopant.

32. (Previously Presented) The method of manufacturing the semiconductor device according to claim 2,

wherein the laser beam has one of a linear shape and an elliptical shape on the irradiation surface.

33. (Previously Presented) The method of manufacturing the semiconductor device according to claim 3,

wherein the laser beam has one of a linear shape and an elliptical shape on the irradiation surface.

34. (Previously Presented) The method of manufacturing the semiconductor device according to claim 4,

wherein the laser beam has one of a linear shape and an elliptical shape on the irradiation surface.

35. (Previously Presented) The method of manufacturing the semiconductor device according to claim 5,

wherein the laser beam has one of a linear shape and an elliptical shape on the irradiation surface.